

Formal Agreement with Poultry Companies

The Nutrient Management Commission continues to implement the agreement outlined in the 2001 Memorandum of Understanding. The document was signed January 8, 2001 by the chief executives of all poultry companies operating in Delaware, DDA and DNREC. The agreement was for the purpose of identifying responsibilities of all parties in the effort of implementing nutrient management. The poultry companies adopted general guidance and leadership roles in promoting environmental protection within the companies and contracted growers. The document expands on the legal requirement to submit an annual report to the Commission outlining the accomplishments and strategy for nutrient management. The annual reports are submitted by Allen's Hatchery Inc., Mountaire Farms of Delmarva, Mountaire Farms of Delaware and Perdue Farms Inc. The reports entail the following nutrient management subject matters for company owned farms and contracted farms:

1. Compliance with the Nutrient Management Law;
2. Litter and manure management;
3. Technical assistance;
4. Alternative use and excess litter;
5. Feed formulation for Phosphorus management;
6. Research projects;
7. Financial commitment;
8. Education.

The cooperative agreement with Allen's, Mountaire and Perdue has generated results that benefit the state, poultry industry, contract growers and the general public. Highlights of the 2005 reports follow:

1. All poultry companies continue to sponsor and fund the Environmental Stewardship Program;
2. All flock supervisors and many company employees are certified as nutrient handlers;
3. All contract growers are provided with educational material relating to technical and legal requirements;
4. All companies are committed to alternative use options for excess poultry litter generated by the company and contracted farms;
5. All companies continue to explore and research phosphorus management in feed;
6. All companies utilized phytase amended feed with significant reductions in Phosphorus.



Poultry feed that is delivered to contract growers is amended with phytase, which results in a 23% reduction in manure litter phosphorus. (Saylor, 2005)

Phosphorus Management and Phytase

Managing phosphorous properly is required in the Nutrient Management Law by restricting phosphorous applications to the crop removal rate. Phosphorous based manure applications can be managed and applied as a three year crop removal rate. Excess poultry litter is managed by nutrient generators participating in the Relocation Program and alternative use projects such as the Perdue AgriRecycle plant. Phosphorous is also managed in the feed formulations of the poultry companies. Phytase is significantly helping the industry better manage phosphorus in the feed and litter.



The crop removal rate is significant in determining the phosphorus application rate.

Phytase is an enzyme currently added to poultry feed at the mill that helps broilers and other poultry utilize more indigestible (phytic acid) phosphorus. This in turn reduces the need to add supplemental phosphorous to the feed and also reduces the phosphorous concentration in the litter. Reports indicate that phytase has decreased phosphorous content in litter by about 23% (Saylor, 2005). Recent poultry litter analysis has identified an average of 44 lbs. phosphorous (P_2O_5) per ton (Hansen, 2005). Analysis prior to 2001 was commonly seen at 60-70 lbs. P_2O_5 per ton. A total 27-37% phosphorus reduction is a result from phytase, litter amendments and overall litter handling. The use of phytase is one of several strategies needed to meet the intent of the Delaware Nutrient Management Law.



Managing field runoff and drainage ditches are important in reducing nutrient runoff.

Budget

The Nutrient Management Commission’s accomplishments were made possible by funding provided by the Legislature and Governor Minner. The Nutrient Management Program is well into implementing nutrient planning, relocation and mandated activities as required by the Nutrient Management Law. The law requires full implementation of the program by January 2007.

Budget request for Fiscal Year 2007:

FY 2005 Budget Budget	FY 2006 Budget	FY 2007 Requested	
Program Operating Costs:			
Personnel	221,700	233,300	253,800
Federal Funds section 319 (Clean Water Act)	20,000	26,100	29,600
Travel	4,000	4,000	4,000
Contractual	17,000	17,000	17,000
Supplies	4,000	4,000	4,000
Information/Education/Certification	221,000	221,000	221,000
Nutrient Relocation Program	246,000	246,000	246,000
Federal Funds section 319 (Clean Water Act)	200,000	200,000	200,000
Federal Funds Ches. Bay Program	100,000	100,000	100,000
Nutrient Management Planning	451,800	451,800	451,800
Research and Demonstration	0	160,000	0
TOTAL	\$1,485,500	\$1,663,200	\$1,527,200

Note: The above Requested Budget was approved by Governor Minner as part of the 2007 operating budget.

Delaware Environmental Stewardship Program

The Commission partnered with three poultry integrators to select and recognize the 2005 environmental stewards. Allen’s Family Food Inc., Mountaire Farms Inc. and Perdue Farms, Inc. funded the 2005 stewardship program, which was designed to recognize smaller poultry farms.

The Environmental Stewardship program was established in 2001 to recognize farmers whose stewardship and general farm practices contribute to the conservation of the environment, water quality and farmland. The program recognized growers by evaluating nutrient management, best management practices, farm management, innovation, biodiversity and wildlife management.

The 2005 Delaware Environmental Stewardship was awarded to three farm families during the 2006 Governor’s Conference on Agriculture. Joseph E. and Denise Calhoun of Dagsboro were awarded the top award and received a cash award of \$2,500, a lane sign (see photo) and a plaque.

Jerrel and Alma Heatwole of Greenwood, Delaware and Jack D. and Kathy Snyder of Millsboro were also awarded with a cash award of \$250, a lane sign (see photo) and a plaque.

Below, from left to right: Tom Brinson (Allen’s Family Food), Alma Heatwole (2005 finalist), John Chlada (Perdue Farms), Kathy Snyder (finalist), Jack Snyder (finalist) Denise Calhoun (recipient), Joe Calhoun (recipient), Jeff Smith (Mountaire Farms), and Bill Vanderwende (DNMC Chairman).



*Past Environmental
Stewardship
Program
Award Winners:*

2004

Richfield Farms;
John Mills,
Greenwood

2003:

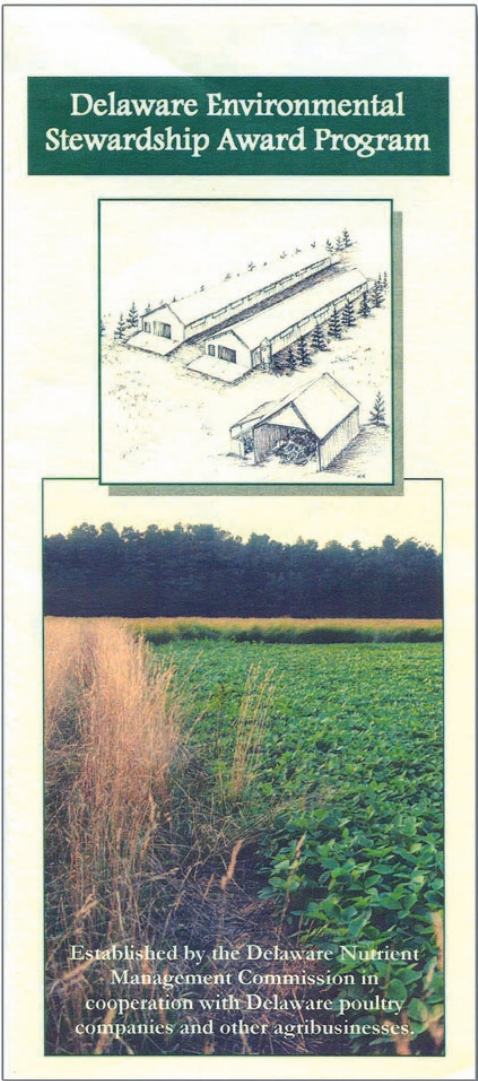
Ronald and Scott
Webb, Greenwood

2002:

Roland and Laura Hill,
Lewes

2001:

Charles P. West II,
Gumboro



Call (302) 698-4500 today for
an Environmental Stewardship
Program brochure

Complaint Resolution

Complaints related to manure management and general nutrient management practices are handled and resolved by program staff. Formal complaints against any alleged violation of the Nutrient Management Law, regulations or standards are investigated by program staff and recommended for action by the Commission.

The Nutrient Management Program and Commission have taken action on thirty-four formal complaints and/or alleged violations. Nine were for failing to meet the certification deadline and 25 for failure to respond to Mandatory Nutrient Management Plan Regulations. Four of the 34 alleged nutrient management violation cases proceeded to a Commission hearing. All four cases were found to be in violation of the Nutrient Management Law.

During 2005, 37 informal complaints were received and resolved relating to manure management, livestock management, odor and livestock mortality handling. The categories of complaints and operation types are summarized and follow:

Complaint Category

Manure management	38%
Animal mortality management	24%
Miscellaneous	19%
Manure odor	14%
Nutrient Management Certification	5%

Operation Type

Poultry	62%
Horse	8%
Field Crop Only	8%
Dairy	8%
Cattle	6%
Lawn Care	6%
Swine	2%



University of Delaware Demonstration plots compared poultry litter application rates of 1.5, 3, 6 and 8 tons/acre on dry land corn. The results indicated that there is no yield benefit in applying more than 3 tons/acre (Binford, G. 2001. Delaware Nutrient Management Notes. University of Delaware).



Horse farms must also comply with nutrient management standards. Manure storage, roof runoff, animal wash-down sites and other practices are common focal practices for horse farms.



As the population grows, so does the awareness for proper manure handling and the need for complaint resolution.

Recommended Incentives

As the Nutrient Management Program approaches full implementation, the Commission recommends continued financial commitment to research priorities, nutrient management planning, nutrient relocation and best management practices. Expenses incurred as a result of regulatory requirements or voluntary efforts to implement most nutrient management practices would significantly reduce the profitability of agriculture if not assisted by public funding. Adequate funding is the key to successfully implementing the Nutrient Management Program.

References

Hansen, D., Nelson, J., Binford, G., Sims, T., Saylor, W. 2005. *Phosphorus in Poultry Litter: New Guidelines from the University of Delaware*. College of Agriculture and Natural Resources, University of Delaware, Newark, DE

NonPoint Source Program (NPS) *Annual Report*. 2004. Agriculture, Delaware’s Conservation Districts, p. 2.

Saylor, W., Sims, T., Angel, R. 2005. *Modifying Diets with Phytase: Mode of Action and Effects on Litter Phosphorous*. University of Delaware and University of Maryland.

Background & Contacts

What is the Delaware Nutrient Management Commission?

The Nutrient Management Law established a 19-member Commission that is charged to develop, review, approve, and enforce regulations governing the certification of individuals engaged in the business of land application of nutrients and the development of nutrient management plans. The members of this Commission come from many different backgrounds and professions.

Mission statement

The Delaware Nutrient Management Commission’s official mission is:

“To manage those activities involving the generation and application of nutrients in order to help improve and protect the quality of Delaware’s ground and surface waters, sustain and promote a profitable agricultural community, and to help meet or exceed federally mandated water quality standards, in the interest of the overall public welfare.”